

HISTORY KEPT YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		ILLINOIS HIGHWAY INFORMATION SYSTEM STRUCTURE INFORMATION AND PROCEDURE MANUAL	
NBIS REQUIRED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		ITEM NAME SCOUR CRITICAL EVALUATION	ITEM NO. 113 PAGE 1 of 3 EFF. DATE 07/01/02
		ISIS	MMIS
RESPONSIBLE FOR UPDATE	District Local Roads	District Maintenance/Operations	
STRUCTURES	Local	State	
UPDATE SCREENS	(15) Scour Critical Analysis	(5) Scour Critical	
INQUIRY SCREENS	(17) Scour Critical Analysis	(6) Scour Critical	

DESCRIPTION AND PURPOSE OF ITEM

The purpose of this item is to identify the current status of the bridge regarding its vulnerability to scour.

A scour critical bridge is one with abutment or pier foundations which are rated as unstable due to (1) observed scour at the bridge site, or (2) a scour potential as determined from a scour evaluation study. Details on conducting a scour evaluation are included in the FHWA Technical Advisory - T5140.20, "Scour at Bridges", and Hydraulic Engineering Circular #18 (HEC 18).

For foundations on rock where scour cannot be calculated, use the coding most descriptive of site conditions.

The evaluation of this item is unrelated to the rating for Item 60 (Substructure Condition) unless it is based on actual scour that is presently affecting the structure.

History is retained for this item based on each Analysis Date - Item 113A.

CODE AND SCREEN ENTRY INSTRUCTIONS

A one-digit code.

Enter the appropriate code for all structures.

<u>Code</u>	<u>Description</u>
Blank	Bridge not over waterway.
9	Bridge foundations (including piles) well above flood water elevations.
8	Bridge foundations evaluated as stable for scour. The following cases apply: <ul style="list-style-type: none"> ▪ Calculated scour is above top of footing (Example A). ▪ Pile bent substructures with adequate soil support remaining after
	calculated scour has occurred.

ILLINOIS HIGHWAY INFORMATION SYSTEM

STRUCTURE INFORMATION AND PROCEDURE MANUAL

ITEM NAME **SCOUR CRITICAL EVALUATION**

ITEM NO.	113
PAGE	2 of 3
EFF. DATE	07/01/02

CODE AND SCREEN ENTRY INSTRUCTIONS

<u>Code</u>	<u>Description</u>
7	Countermeasures have been installed to correct a previously existing problem with scour. Bridge is not scour critical. Special monitoring may be required to insure the adequacy of the installed countermeasures. Item 93B5 should be coded accordingly. If no special monitoring is required, Item 93B5 need not be coded.
6	Scour calculation/evaluation has not been made. (Code 6 is <u>used only to describe cases where a structure has not yet been evaluated for scour potential</u>).
5	Bridge foundation determined by the evaluation team to be stable for scour conditions; scour within limits of footing or piles (Example B). Monitoring may be established at the direction of the scour evaluation team. When special monitoring is required, Item 93B5 is to be coded to include Underwater Category 6 and Item 92B is to be coded with the interval between 1 and 60 months, as determined by the evaluation team.
4	Bridge foundations determined by the evaluation team to be stable for scour conditions, field review indicates action is required to protect exposed foundations from effects of additional erosion and corrosion. Monitoring is required once every 2 years. For state-maintained structures, Item 93B5 is to be coded to include Underwater Category 6 (Example C) and Item 92B is to be coded 24.
3	<p>Bridge is scour critical. Bridge foundations determined by the scour evaluation team to be unstable for scour conditions.</p> <ul style="list-style-type: none"> ▪ Estimated scour within limits of footing or piles. (Example B) ▪ Estimated scour below spread-footing base or pile tips. (Example C) <p>Monitoring is required on a yearly basis and following significant storms. Item 93B5 is to be coded to include Underwater Category 6.</p>
2	Bridge is scour critical. Field review indicates that extensive scour has occurred at bridge foundations. Immediate action is required to provide scour countermeasures.
1	Bridge is scour critical. Field review indicates that failure of piers/abutments is imminent. Bridge is closed to traffic.
0	Bridge is scour critical. Bridge has failed and is closed to traffic.

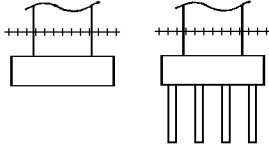
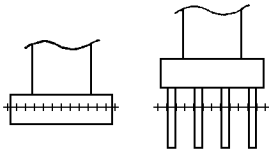
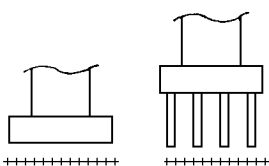
ILLINOIS HIGHWAY INFORMATION SYSTEM

STRUCTURE INFORMATION AND PROCEDURE MANUAL

ITEM NAME **SCOUR CRITICAL EVALUATION**

ITEM NO.	113
PAGE	3 of 3
EFF. DATE	07/01/02

CODE AND SCREEN ENTRY INSTRUCTIONS (continued)

<u>Examples:</u>	<u>Calculated Scour Depth</u>	<u>Action Needed</u>
A. Above top of footing		None-indicate rating of 8 for this item
B. Within limits of footing or piles		Conduct foundation structural analysis
C. Below pile tips or spread footing base		Provide for monitoring and scour countermeasures as necessary

+++++ = Calculated Scour Depth